

FIG. 1

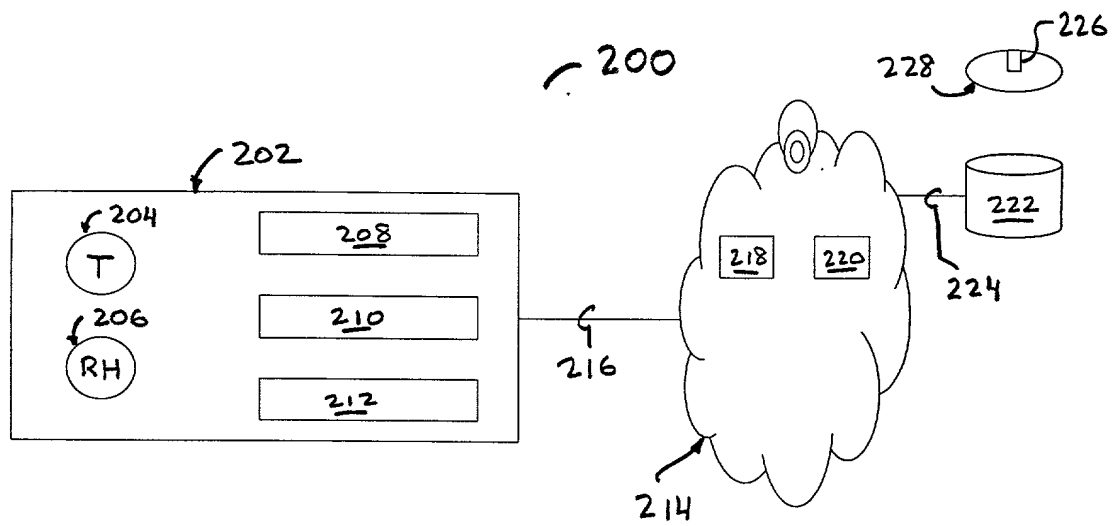


FIG. 2A

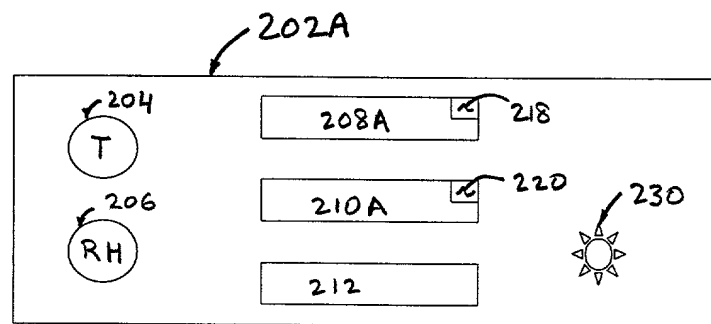


FIG. 2B

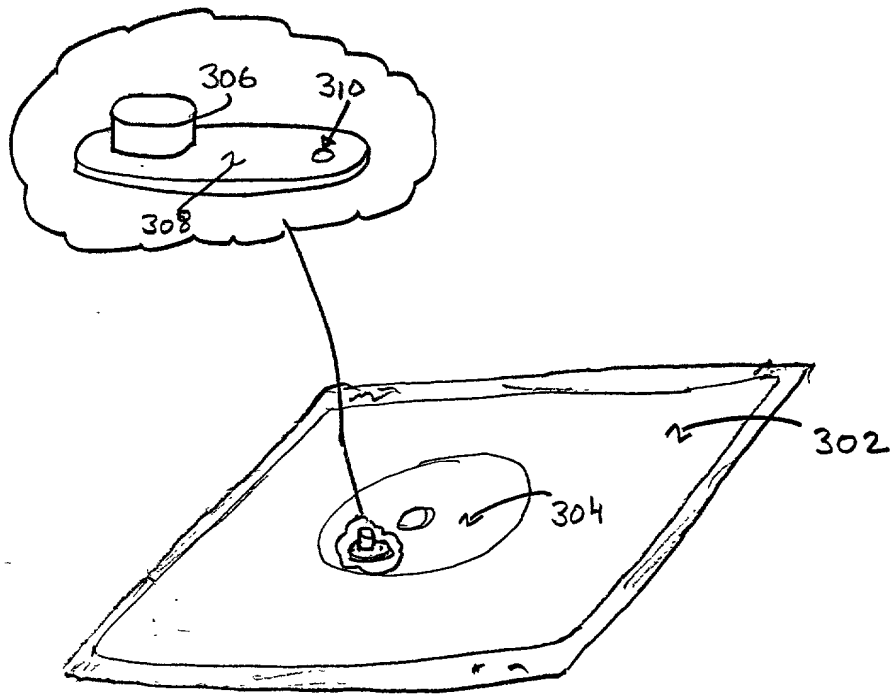


FIG. 3A

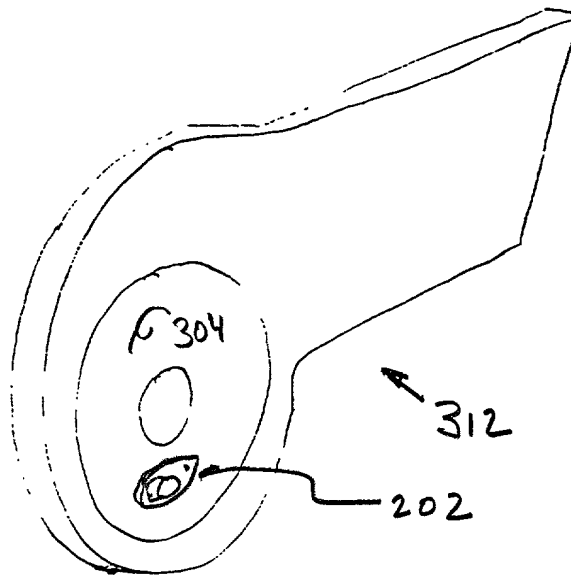


FIG. 3B

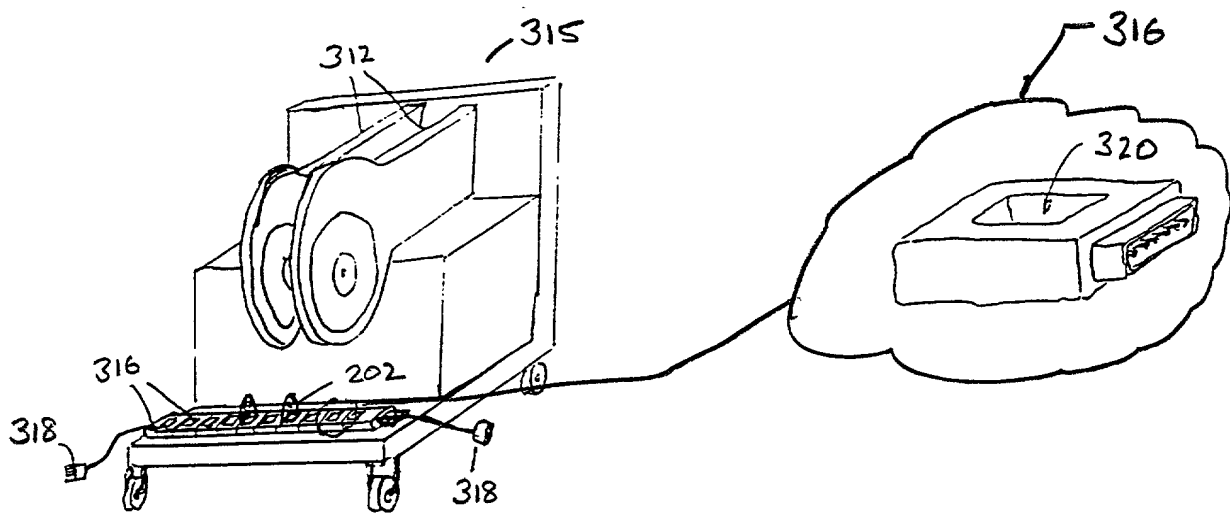


FIG. 3C

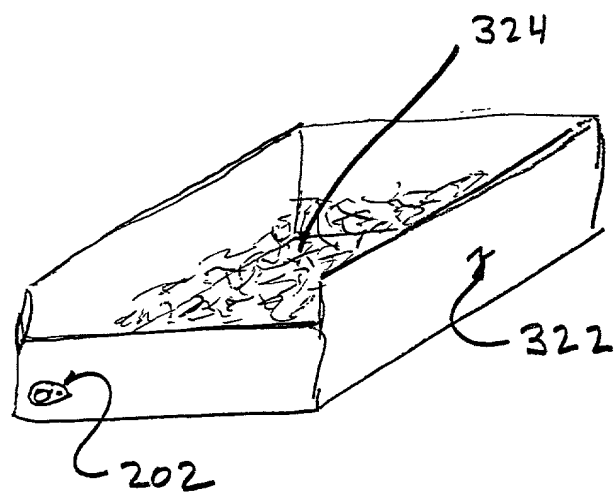


FIG. 3D

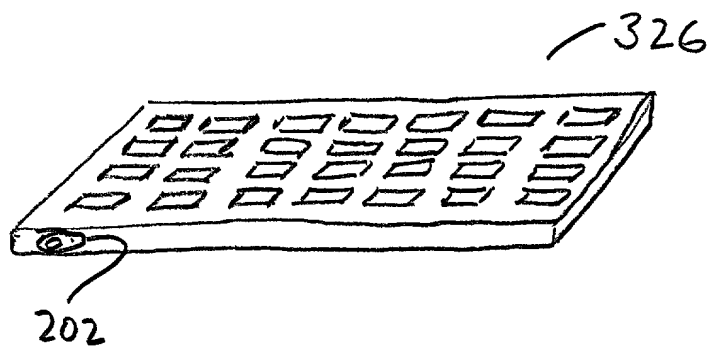


FIG. 3E

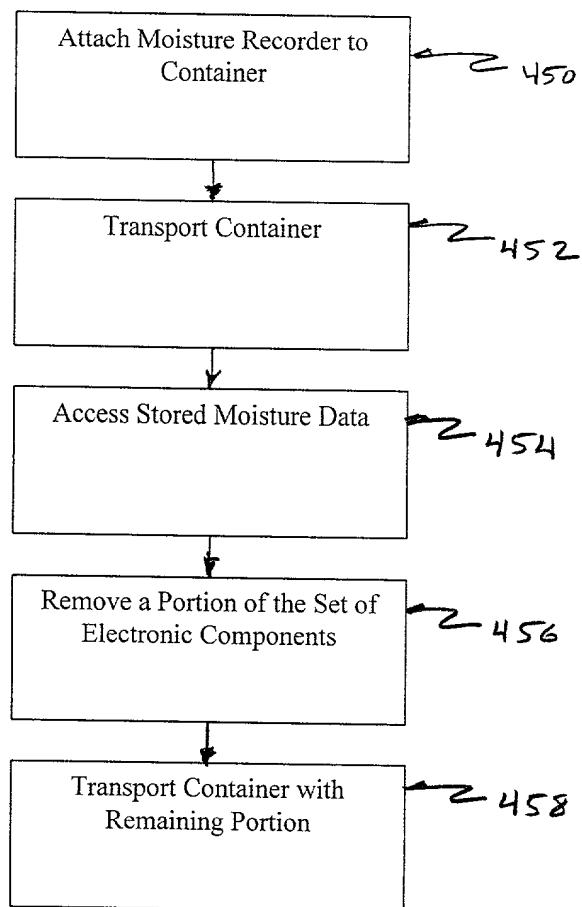


FIG. 4

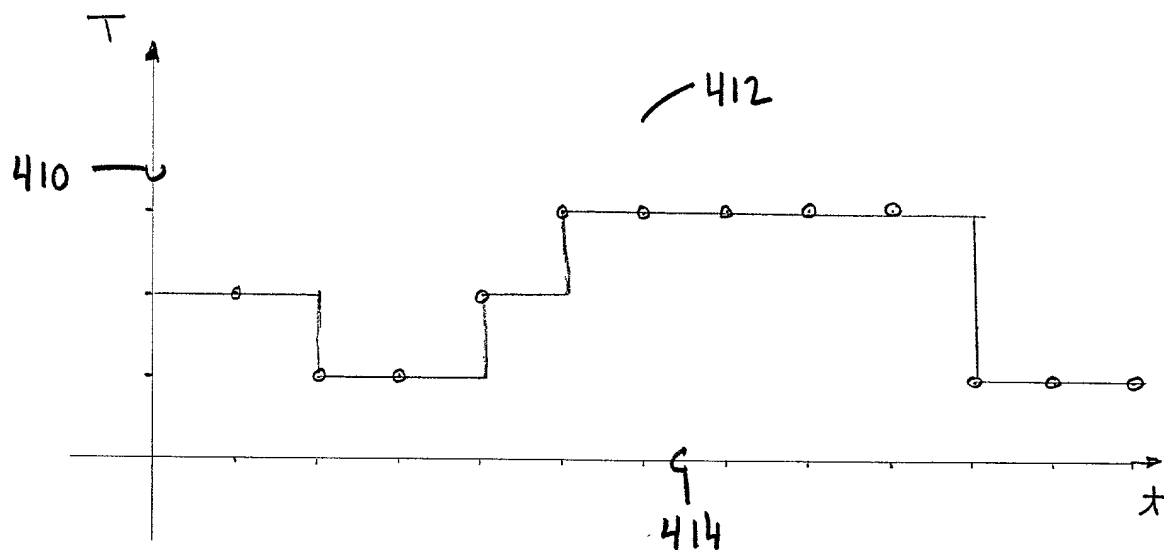
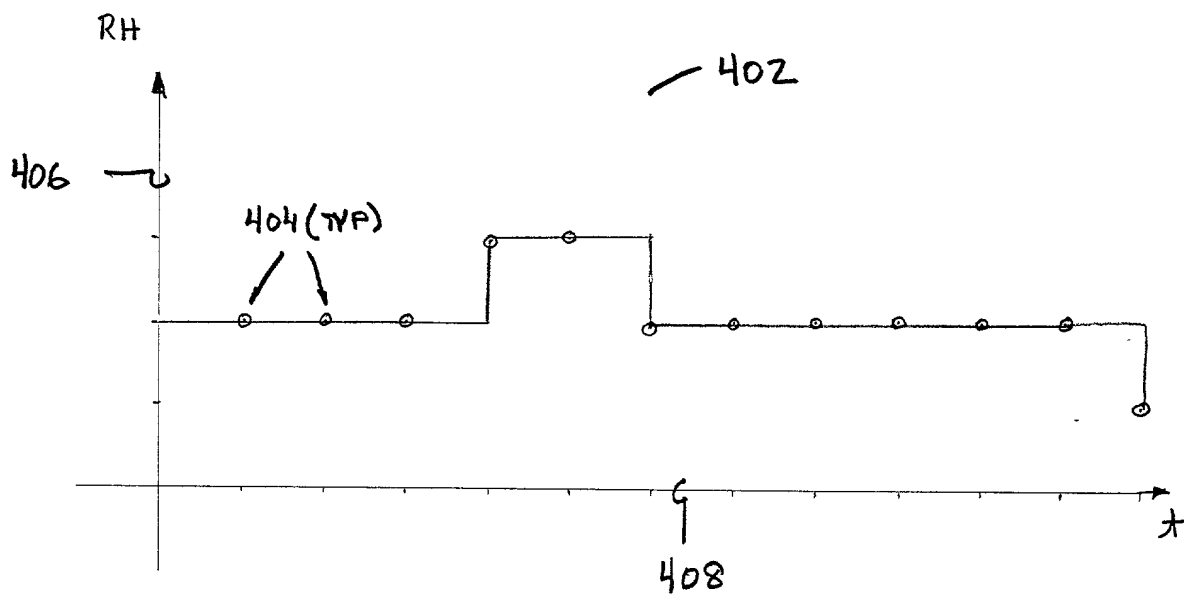


FIG. 5

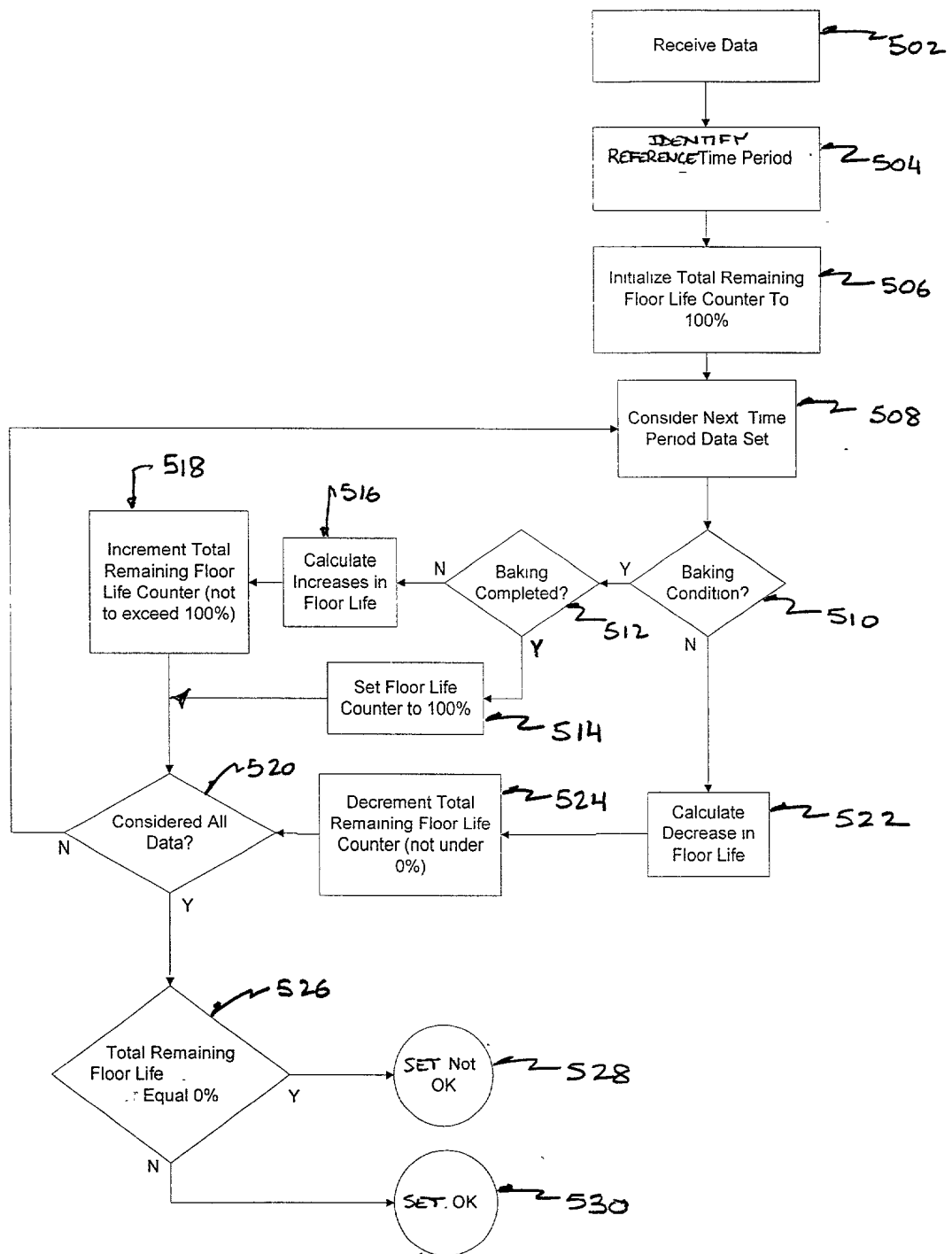


FIG. 6A

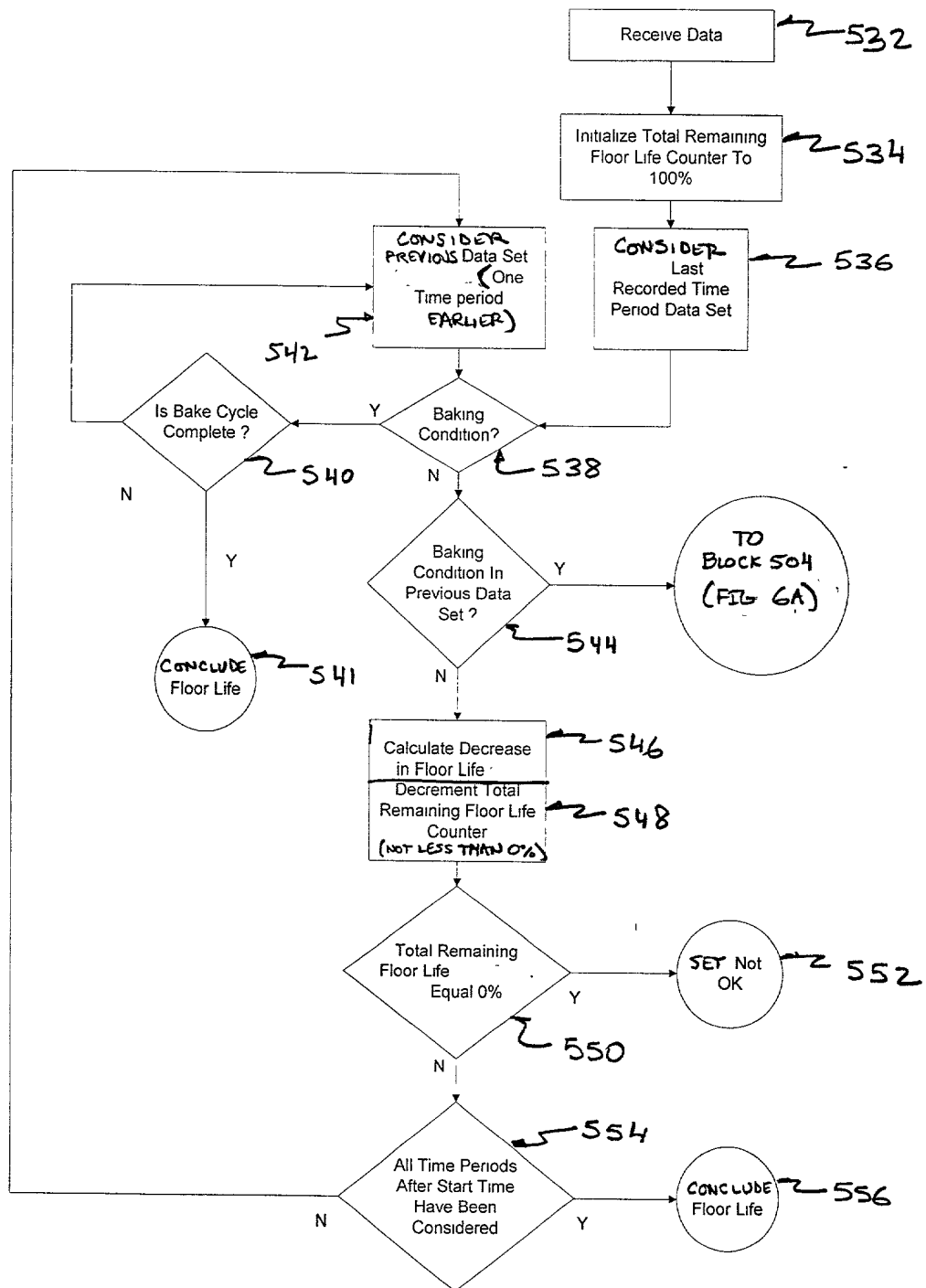


FIG. 6B

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IPC/JEDEC J-STD-033

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Table 5 Recommended Equivalent Total Floor Life (days) @ 20°C, 25°C & 30°C
For ICs with Novolac, Biphenyl and Multifunctional Epoxies
(Reflow at same temperature at which the component was classified)

		Maximum Percent Relative Humidity								
Body Thickness (t)	M.S. Level	20%	30%	40%	50%	60%	70%	80%	90%	
t ≥3.1 mm PQFPs >84 pins, .PLCCs (square) MQFPs or PBGAs	Level 2a	∞	60	41	33	28	10	7	6	30°C
		∞	78	53	42	36	14	10	8	25°C
		∞	103	69	57	47	19	13	10	20°C
	Level 3	10	9	8	7	7	5	4	4	30°C
		13	11	10	9	9	7	6	5	25°C
		17	14	13	12	12	10	8	7	20°C
	Level 4	4	4	4	3	3	3	2	2	30°C
		5	5	5	5	4	3	3	3	25°C
		7	7	7	7	6	5	4	4	20°C
	Level 5	3	3	2	2	2	2	1	1	30°C
		5	4	4	3	3	2	2	2	25°C
		7	6	5	5	4	3	3	3	20°C
	Level 5a	1	1	1	1	1	1	1	1	30°C
		2	2	2	2	2	1	1	1	25°C
		4	3	3	3	2	2	2	2	20°C
t ≤2.1 mm t <3.1 mm PLCCs (rectangular) 18-32 pins SOICs (wide body) SOICs ≥20 pins, PQFPs ≤80 pins	Level 2a	∞	∞	86	39	28	4	3	2	30°C
		∞	∞	148	51	37	6	4	3	25°C
		∞	∞	∞	69	49	8	5	4	20°C
	Level 3	19	12	9	8	7	3	2	2	30°C
		25	15	12	10	9	5	3	3	25°C
		32	19	15	13	12	7	5	4	20°C
	Level 4	5	4	4	3	3	2	2	1	30°C
		7	5	5	4	4	3	2	2	25°C
		9	7	6	6	5	4	3	3	20°C
	Level 5	3	3	2	2	2	1	1	1	30°C
		4	3	3	3	3	2	1	1	25°C
		5	5	4	4	4	3	3	2	20°C
	Level 5a	1	1	1	1	1	1	0.5	0.5	30°C
		2	2	2	2	2	1	1	1	25°C
		2	2	2	2	2	2	2	1	20°C
t <2.1 mm TSOPs, SOICs <18 pins TQFPs or TBGAs	Level 2a	∞	∞	∞	∞	28	1	1	1	30°C
		∞	∞	∞	∞	∞	2	1	1	25°C
		∞	∞	∞	∞	∞	2	2	1	20°C
	Level 3	∞	∞	∞	11	7	1	1	1	30°C
		∞	∞	∞	14	10	2	1	1	25°C
		∞	∞	∞	20	13	2	2	1	20°C
	Level 4	∞	9	5	4	3	1	1	1	30°C
		∞	12	7	5	4	2	1	1	25°C
		∞	17	9	7	6	2	2	1	20°C
	Level 5	13	5	3	2	2	1	1	1	30°C
		18	6	4	3	3	2	1	1	25°C
		26	8	6	5	4	2	2	1	20°C
	Level 5a	3	2	1	1	1	1	1	0.5	30°C
		5	3	2	2	2	1	1	1	25°C
		6	4	3	2	2	2	2	1	20°C

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FIG. 7

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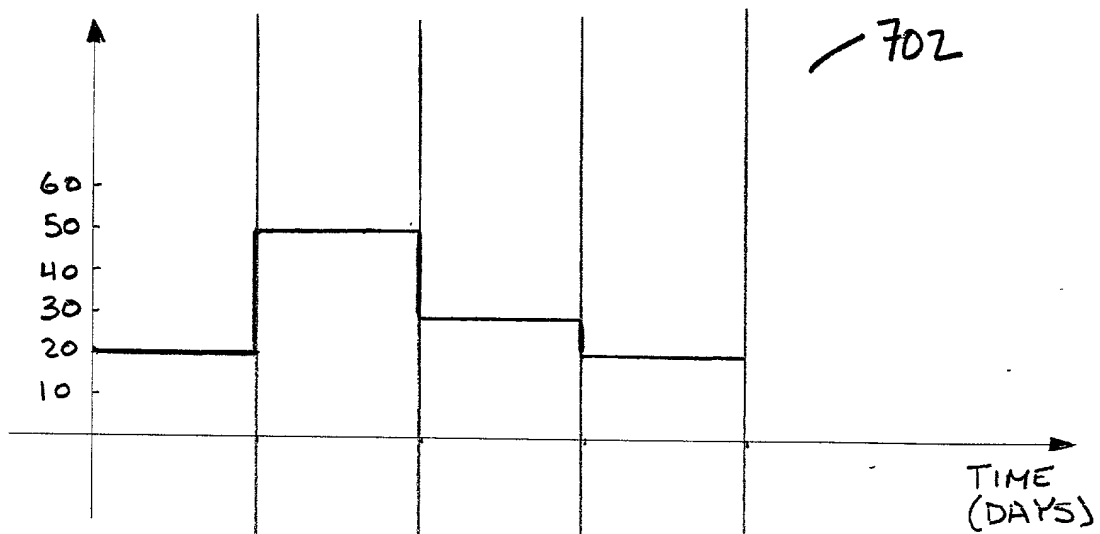
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Table 2 Reference Conditions for Drying Components that were Exposed to Conditions $\leq 60\%$ RH
(User Bake: Floor Life Begins Counting at Time = 0 After Bake)

Package Thickness	Level	Bake @ 125°C	Bake @ 40°C $\leq 5\%$ RH
≤ 1.4 mm	2a	4 hours	5 days
	3	7 hours	11 days
	4	9 hours	13 days
	5	10 hours	14 days
	5a	14 hours	19 days
≤ 2.0 mm	2a	18 hours	21 days
	3	24 hours	33 days
	4	31 hours	43 days
	5	37 hours	52 days
	5a	48 hours	68 days
≤ 4.0 mm	2a	48 hours	67 days
	3	48 hours	67 days
	4	48 hours	68 days
	5	48 hours	68 days
	5a	48 hours	68 days

FIG. 8

RELATIVE
HUMIDITY (%)



TEMPERATURE
(°C)

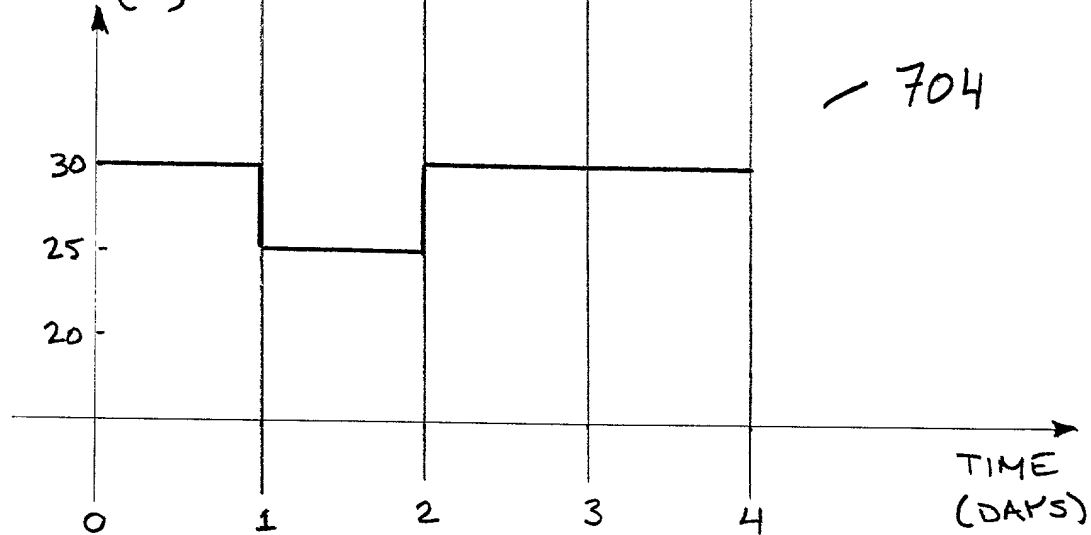


FIG. 9
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